

REMARKS

Claims 1-11 are pending in this application. Claims 1 and 3 are herein amended. Reconsideration of the rejections in view of these amendments and the following remarks is respectfully requested.

Rejections under 35 USC §112

Claims 1-11 were rejected under 35 USC §112, first paragraph, as failing to comply with the enablement requirement.

Accordingly, claims 1 and 3 have been amended to overcome this rejection.

Rejections under 35 USC §102(b)

Claims 1, 3, 5, 10 and 11 were rejected under 35 U.S.C. §102(b) as being anticipated by Ina (U.S. Patent No. 6,111,010).

Applicants respectfully traverse this rejection.

Claim 1 has been amended to recite, “an organic intermediate layer formed on the lower resist layer and made of organic silicon-containing material that contains no Si-O bond.” Similarly, claim 3 also has been amended to recite “forming an organic intermediate layer made of organic silicon-containing material, that contains no Si-O bond in its structure, on the lower resist layer.”

Ina describes about the material of the middle layer, which allegedly corresponds to the “organic intermediate layer,” that “The middle layer 4 is preferably formed of an organic substance from the view point of the facility in forming, the damages to the lower layer and the resistance to dry etching” (col. 3, lines 60-62) and that “The middle layer 4 may be made of, for example, a

material containing a dye for shielding the radiated lights and an acrylic resin having a high etching rate as a major component” (col. 7 lines 37-40). Also, Ina describes that “A polyvinyl alcohol resin was used as the middle layer” (col. 8, line 27 and (col. 11, line 21). None of these descriptions regarding the middle layer 4 indicates “organic **silicon-containing** material that contains no Si-O bond.”

Although a three-layer structure may appear common among claims 1, 3 and Ina, patterning (transfer) of the middle layer 4 is carried out by oxygen plasma and patterning (transfer) of the lower layer 3 is carried out by development after entire exposure are completely different from Ina. Because a middle layer containing silicon cannot be etched by oxygen plasma, in Ina, silicon-containing material cannot be used as the middle layer 4.

Thus, Ina does not teach or suggest, among other things, “an organic intermediate layer formed on the lower resist layer and made of organic silicon-containing material that contains no Si-O bond,” as recited in amended claim 1, or “forming an organic intermediate layer made of organic silicon-containing material, that contains no Si-O bond in its structure, on the lower resist layer,” as recited in amended claim 3.

For at least these reasons, claims 1 and 3 patentably distinguish over Ina. Claims 5, 10 and 11, all depending from claim 3 also patentably distinguish over Ina for at least the same reasons.

Thus, the 35 USC §102(b) rejection should be withdrawn.

Rejections under 35 USC §103(a)

Claims 2 and 4 were rejected under 35 USC §103(a) as being obvious over Ina in view of Zeigler (U.S. Patent No. 4,820,788).

Applicants respectfully traverse this rejection.

Zeigler has been cited for allegedly disclosing organo poly(silylsilane) polymers having high photosensitivity and excellent resistance to oxygen reactive ion etching processes. Such disclosure, however, does not remedy the deficiencies of Ina.

In Zeigler, polysilane functions as an etch mask in multilayer resist method. However, the organic intermediate layer made of organic silicon-containing material that contains no Si-O bond and the upper resist layer made of alicyclic resin in amended claims 1 and 3 are not described and are not suggested in Zeigler.

For at least these reasons, claim 2, depending from claim 1, and claim 4, depending from 3, also patentably distinguish over Ina and Zeigler.

Thus, the 35 USC §103(a) rejection should be withdrawn.

It is submitted that nothing in the cited references, taken either alone or in combination, teaches or suggests all the features recited in each claim of the present invention. Thus all pending claims are in condition for allowance. Reconsideration of the rejections, withdrawal of the rejections and an early issue of a Notice of Allowance are earnestly solicited.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

Application No. 10/092,310
Amendment dated June 7, 2004
Reply to Office Action of March 9, 2004

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. The fees for such an extension or any other fees which may be due with respect to this paper, may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

A handwritten signature in black ink, appearing to read 'Sadao Kinashi', with a stylized flourish at the end.

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